

inform
On page 41, please replace the third full paragraph with the following:

The, the crystalline silicon film 903 is patterned to form an active layer of the TFT. After a 1,000 Å thick silicon oxide film to become a gate insulating film 904 is formed by plasma CVD, a 5,000 Å thick film mainly made of aluminum is formed and then patterned into a gate electrode 905. A 2,000 Å thick oxide layer 906 is formed around the gate electrode 905 by performing anodic oxidation in an electrolyte with the gate electrode 905 used as the anode.

IN THE CLAIMS:

Please amend the claims as follows. For the convenience of the examiner, attached hereto is a marked-up copy of the claims as amended.

24. (Amended) A method of fabricating a semiconductor device comprising steps of:
forming an amorphous semiconductor film over a substrate having an insulating surface;
adding a solution including a catalyst material in contact with said amorphous semiconductor film, said catalyst material being capable of crystallization of said amorphous semiconductor film;
first heating said amorphous semiconductor film to crystallize;
irradiating said crystallized semiconductor film with a light to promote further crystallization of said crystallized semiconductor film after said first heating step; and
reducing defects in said crystallized semiconductor film by second heating said crystallized semiconductor film at a temperature not lower than 450°C after said irradiating step.

32. (Amended) A method of fabricating a semiconductor device comprising steps of:
forming an amorphous semiconductor film over a substrate having an insulating surface;
selectively adding a solution including a catalyst material in contact with a first portion of said amorphous semiconductor film while said solution is not added to a second portion of said amorphous semiconductor film, said catalyst material being capable of crystallization of said amorphous semiconductor film;
first heating said amorphous semiconductor film so that crystal growth proceeds from said first portion to said second portion in a lateral direction with respect to said insulating surface;
irradiating said crystallized semiconductor film with a light to promote further crystallization

of said crystallized semiconductor film after said first heating step; and

reducing defects in said crystallized semiconductor film by second heating said crystallized semiconductor film at a temperature not lower than 450°C after said irradiating step.

38. (Amended) A method according to claim 32 wherein said irradiating step is performed in a nitrogen atmosphere.

41. (Amended) A method of fabricating a thin film transistor comprising steps of:

forming an amorphous semiconductor film over a substrate having an insulating surface;

selectively adding a solution including a catalyst material in contact with a first portion of said amorphous semiconductor film while said solution is not added to a second portion of said amorphous semiconductor film, said catalyst material being capable of crystallization of said amorphous semiconductor film;

first heating said amorphous semiconductor film so that crystal growth proceeds from said first portion to said second portion in a lateral direction with respect to said insulating surface;

irradiating said crystallized semiconductor film with a light to promote further crystallization of said crystallized semiconductor film after said first heating step;

reducing defects in said crystallized semiconductor film by second heating said crystallized semiconductor film at a temperature not lower than 450°C after said irradiating step; and

forming a channel forming region in said semiconductor film using said second portion of the crystallized semiconductor film.

47. (Amended) A method according to claim 41 wherein said irradiating step is performed in a nitrogen atmosphere.

50. (Amended) A method of fabricating a semiconductor device comprising steps of:

forming an amorphous semiconductor film over a substrate having an insulating surface;

introducing a catalyst material in contact with said amorphous semiconductor film, said catalyst material being capable of crystallization of said amorphous semiconductor film;

first heating said amorphous semiconductor film to crystallize;
irradiating said crystallized semiconductor film with a light to promote further crystallization of said crystallized semiconductor film after said first heating step; and
reducing defects in said crystallized semiconductor film by second heating said crystallized semiconductor film at a temperature not lower than 450°C after said irradiating step; and then patterning said semiconductor film so as to form a plurality of semiconductor islands.

56. (Amended) A method of manufacturing a semiconductor device comprising:
forming a semiconductor film comprising amorphous silicon over a substrate having an insulating surface;
crystallizing said semiconductor film by first heating using a catalyst material;
irradiating the crystallized semiconductor film with a pulsed excimer laser light to increase crystallinity of the semiconductor film after said first heating wherein one portion of said semiconductor film is irradiated with a plurality of shots of said pulsed excimer laser light,
reducing defects of the crystallized semiconductor film by second heating at a temperature not lower than 450°C after the irradiation of said laser light.

59. (Amended) A method according to claim 24 wherein said temperature of said second heating is lower than a strain point of said substrate.

60. (Amended) A method according to claim 32 wherein said second heating is lower than a strain point of said substrate.

61. (Amended) A method according to claim 41 wherein said second heating is lower than a strain point of said substrate.

62. (Amended) A method according to claim 50 wherein said temperature of said second heating is lower than a strain point of said substrate.

63. (Amended) A method according to claim 56 wherein said temperature of said second heating is lower than a strain point of said substrate.

Please add new claims 64-75 as follows. Note that new claims 64, 65 are described in the specification on page 17, lines 24-27, claims 66-70 are supported in the specification on page 11, lines 6-13, and claims 71-75 are based upon embodiment 7 in the specification. Thus, no matter has been added.

64. (New) A method according to claims 24 wherein said irradiating step is performed in a nitrogen atmosphere.

65. (New) A method according to claims 50 wherein said irradiating step is performed in a nitrogen atmosphere.

66. (New) A method according to claims 24 wherein said temperature of said second heating is a range from 450 to 750°C.

67. (New) A method according to claims 32 wherein said temperature of said second heating is a range from 450 to 750°C.

68. (New) A method according to claims 41 wherein said temperature of said second heating is a range from 450 to 750°C.

69. (New) A method according to claims 50 wherein said temperature of said second heating is a range from 450 to 750°C.

70. (New) A method according to claims 56 wherein said temperature of said second heating is a range from 450 to 750°C.

71. (New) A method according to claims 24 wherein said semiconductor device comprises a